

FORM PTO-1390 (Modified)
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

APV31542

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

10/049660

INTERNATIONAL APPLICATION NO.
PCT/NL00/00593INTERNATIONAL FILING DATE
25 August 2000PRIORITY DATE CLAIMED
30 August 1999

TITLE OF INVENTION

INSERT PIECE FOR A CONTAINER HOLDING A LIQUID WHICH IS TO BE HEATED OR COOLED, CONTAINER
HAVING AN INSERT PIECE OF THIS NATURE, AND PROCESS FOR FORMING AN INSERT PIECE

APPLICANT(S) FOR DO/EO/US

Sjoerd Odrik VAN DER VEEN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☐ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☐ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☐ Certificate of Mailing by Express Mail
23. ☒ Other items or information:

WO 01/21339 Cover Sheet
Notice of Claim for Priority


U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 1.53) 10/049660		INTERNATIONAL APPLICATION NO. PCT/NL00/00593		ATTORNEY'S DOCKET NUMBER APV31542	
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24. The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : <input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00 <input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY 																																																																													
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">CLAIMS</th> <th style="width: 20%;">NUMBER FILED</th> <th style="width: 20%;">NUMBER EXTRA</th> <th style="width: 10%;">RATE</th> <th style="width: 15%;"></th> <th style="width: 20%;"></th> </tr> <tr> <td>Total claims</td> <td>16 - 20 =</td> <td>0</td> <td>x \$18.00</td> <td></td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td>Independent claims</td> <td>2 - 3 =</td> <td>0</td> <td>x \$80.00</td> <td></td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td colspan="5">Multiple Dependent Claims (check if applicable) <input type="checkbox"/></td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td colspan="5" style="text-align: center;">TOTAL OF ABOVE CALCULATIONS =</td> <td style="text-align: center;">\$890.00</td> </tr> <tr> <td colspan="5"><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.</td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">SUBTOTAL =</td> <td style="text-align: center;">\$890.00</td> </tr> <tr> <td colspan="5">Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).</td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">TOTAL NATIONAL FEE =</td> <td style="text-align: center;">\$890.00</td> </tr> <tr> <td colspan="5">Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable) <input type="checkbox"/></td> <td style="text-align: center;">\$0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">TOTAL FEES ENCLOSED =</td> <td style="text-align: center;">\$890.00</td> </tr> <tr> <td colspan="5"></td> <td style="text-align: center;">Amount to be: refunded \$</td> </tr> <tr> <td colspan="5"></td> <td style="text-align: center;">charged \$</td> </tr> </table>				CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE			Total claims	16 - 20 =	0	x \$18.00		\$0.00	Independent claims	2 - 3 =	0	x \$80.00		\$0.00	Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00	TOTAL OF ABOVE CALCULATIONS =					\$890.00	<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.					\$0.00	SUBTOTAL =					\$890.00	Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).					\$0.00	TOTAL NATIONAL FEE =					\$890.00	Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable) <input type="checkbox"/>					\$0.00	TOTAL FEES ENCLOSED =					\$890.00						Amount to be: refunded \$						charged \$
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a. <input checked="" type="checkbox"/> A check in the amount of \$890.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 19-4375 . A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.																																																																																	

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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24257
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 SIGNATURE
Anthony P. Venturino
 NAME
31,674
 REGISTRATION NUMBER
Feb. 15, 2002
 DATE

10049660 10/049660

JC11 Rec'd PCT/PTO 15 FEB 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Sjoerd Odrik VAN DER VEEN

Serial No.: To be assigned (National Phase of
PCT/NL00/00593)

Filed: (International Filing Date August 25, 2000)

For: INSERT PIECE FOR A CONTAINER HOLDING A LIQUID WHICH IS TO BE HEATED
OR COOLED, CONTAINER HAVING AN INSERT PIECE OF THIS NATURE, AND PROCESS
FOR FORMING AN INSERT PIECE

PRELIMINARY AMENDMENT

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Prior to the calculation of the filing fee, please amend the above-identified application
as follows:

IN THE ABSTRACT

After the last page of claims, please replace the Abstract with the new Abstract shown on
the attached sheet (ATTACHMENT I).

IN THE CLAIMS

Please amend the claims as follows. A copy of the claims marked up to show the
amendments is attached (ATTACHMENT II).

1. (Amended) An insert piece for a container holding a product which is to be
heated or cooled, which insert piece defines a substantially elongate space which is intended
to accommodate a heating or cooling means, the insert piece having a peripheral wall with a
closed end and an open end, which open end is provided with an outwardly projecting rim

for attaching to the container, the peripheral wall comprising different sections, wherein each section of the peripheral wall has a wall section of substantially constant diameter, and two adjacent sections are connected to one another by an annular transition which is substantially perpendicular to the wall sections.

2. (Amended) The insert piece as claimed in claim 1, wherein the peripheral wall comprises two sections of different diameters.

3. (Amended) The insert piece as claimed in claim 2, wherein the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end.

4. (Amended) The insert piece as claimed in claim 1, wherein the insert piece is made from packaging steel.

5. (Amended) The insert piece as claimed in claim 4, wherein the packaging steel is coated with plastic.

6. (Amended) The insert piece as claimed in claim 1, wherein the insert piece is produced by deep-drawing.

7. (Amended) A container for a product which is to be heated or cooled, provided with an insert piece as claimed in claim 1.

8. (Amended) A process for forming an insert piece for a container for a product which is to be heated or cooled, which insert piece is used to accommodate a heating or cooling means, and which insert piece is of elongate form with a peripheral wall and an open end and a closed end, wherein the insert piece is produced by deep-drawing in at least

two deep-drawing steps, in such a manner that the peripheral wall of the insert piece is composed of two sections of different diameters.

Please add the following new claims.

9. The container as claimed in claim 7, wherein the peripheral wall comprises two sections of different diameters.

10. The container as claimed in claim 9, wherein the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end.

11. The container as claimed in claim 7, wherein the insert piece is made from packaging steel.

12. The container as claimed in claim 11, wherein the packaging steel is coated with plastic.

13. The container as claimed in claim 7, wherein the insert piece is produced by deep-drawing.

14. The process as claimed in claim 8, wherein the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end.

15. The process as claimed in claim 8, wherein the insert piece is made from packaging steel.

16. The process as claimed in claim 15, wherein the packaging steel is coated with plastic.

REMARKS

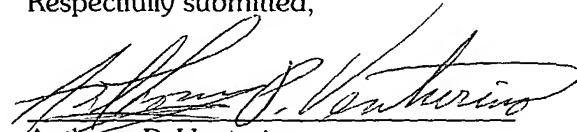
Claims 1-16 are pending. The claims have been amended to delete the multiple dependent claim status. No new matter is presented by the above amendments. Early and favorable consideration of this application is respectfully requested.

Respectfully submitted,

Date:

Feb. 15, 2002

By:



Anthony P. Venturino

Registration No. 31,674

APV/pgw

ATTORNEY DOCKET NO. APV31542

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ATTACHMENT I

ABSTRACT

An insert piece is disclosed for a container holding a product to be heated or cooled. The insert piece defines a substantially elongate space intended to accommodate a heating or cooling means. The insert piece has a peripheral wall with a closed end and an open end. The open end is provided with an outwardly projecting flange for attaching to the container. The peripheral wall is provided with a reinforcement means, preferably a stepped form. A container for a product to be heated or cooled, provided with an insert piece of this nature, and a process for forming an insert piece are also disclosed.

ATTACHMENT II - (Marked up claims)

1. (Amended) An insert piece for a container holding a product which is to be heated or cooled, which insert piece defines a substantially elongate space which is intended to accommodate a heating or cooling means, the insert piece having a peripheral wall with a closed end and an open end, which open end is provided with an outwardly projecting rim for attaching to the container, the peripheral wall comprising different sections, [characterized in that] wherein each section of the peripheral wall has a wall section of substantially constant diameter, and [in that] two adjacent sections are connected to one another by an annular transition which is substantially perpendicular to the wall sections.

2. (Amended) The insert piece as claimed in claim 1, [characterized in that] wherein the peripheral wall comprises two sections of different diameters.

3. (Amended) The insert piece as claimed in claim 2, [characterized in that] wherein the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end.

4. (Amended) The insert piece as claimed in [one of the preceding claims] claim 1, [characterized in that] wherein the insert piece is made from packaging steel.

5. (Amended) The insert piece as claimed in claim 4, [characterized in that] wherein the packaging steel is coated with plastic.

6. (Amended) The insert piece as claimed in [one of the preceding claims] claim 1, [characterized in that] wherein the insert piece is produced by deep-drawing.

7. (Amended) A container for a product which is to be heated or cooled, provided with an insert piece as claimed [in one of the preceding claims] in claim 1.

8. (Amended) A process for forming an insert piece for a container for a product which is to be heated or cooled, which insert piece is used to accommodate a heating or cooling means, and which insert piece is of elongate form with a peripheral wall and an open end and a closed end, [characterized in that] wherein the insert piece is produced by deep-drawing in at least two deep-drawing steps, in such a manner that the peripheral wall of the insert piece is composed of two sections of different diameters.

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JC11 Rec'd PGT/PTO 15 FEB 2002

INSERT PIECE FOR A CONTAINER HOLDING A LIQUID WHICH IS TO BE HEATED OR COOLED, CONTAINER HAVING AN INSERT PIECE OF THIS NATURE, AND PROCESS FOR FORMING AN INSERT PIECE

5 The invention relates to an insert piece for a container holding a product which is to be heated or cooled, which insert piece defines a substantially elongate space which is intended to accommodate a heating or cooling means, the insert piece having a peripheral wall with a closed end and an open end, which open end is provided with an outwardly projecting rim for attaching to the container, the peripheral wall comprising
10 different sections. The invention also relates to a container provided with an insert piece of this nature, and to a process for forming such an insert piece.

 A container for drinks having an insert piece containing a heating means or a cooling means in order to enable the drink to be heated or cooled is known. It can be used, for example, to consume hot coffee at any desired location. For this purpose, the
15 insert piece is usually attached to the base of a can, after which the can is filled with coffee, a lid is fitted to the filled can and the coffee is sterilized. Then, usually an insert is placed into the insert piece, which insert holds, for example, a compartment containing water and a separate compartment containing unslaked lime. As a result of the partition between water and lime being perforated or removed in some other way,
20 the unslaked lime reacts with the water in an exothermic reaction which releases sufficient heat to heat the coffee to a desired temperature. The container may also hold food or some other product.

 A container of this type is known, for example, from American patent 3,802,056. This document shows a container with an insert piece which is folded around the
25 bottom edge of a drinks can, with a second insert piece, which holds a product which releases an exothermic or endothermic reaction at a desired moment, positioned inside the first insert piece. According to one embodiment, both insert pieces have a conical section which runs from their open end into a cylindrical section and, via a bevel, merges into a cylindrical section of smaller diameter.

30 Preferably, use is made of a standard size of drinks can in which there is sufficient space for at least 200 ml of drink and an insert piece with a volume of approximately 100 ml.

 To optimize the heat transfer from the heating means to the drink, the surface of the insert piece has to be as large as possible. On the other hand, it is desirable for the
35 production costs to be as low as possible, and consequently it is desirable for the amount of material used for the insert piece to be as small as possible. Both requirements result, inter alia, in an aim to keep the thickness of the material of the

insert piece as small as possible, so that the heat transfer per unit surface area is as high as possible.

In many cases, a drinks can is filled under pressure or a filled drinks can is subjected to a sterilization treatment. In both cases, the insert piece has to be able to withstand the pressure exerted on it without the walls being plastically deformed.

One drawback of the container which is known from American patent 3,802,056 is that the heat transfer in this container is relatively poor, since two insert pieces which have been pushed into one another are used. The use of two insert pieces also makes this container relatively expensive.

One object of the invention is to provide an improved insert piece.

Another object of the invention is to provide an insert piece which is as thin as possible without the walls being plastically deformed when pressure is applied to the insert piece.

Yet another object is to provide an insert piece which is optimal both in terms of production and in terms of heat transfer.

Yet another object is to provide an insert piece which can be used as a single insert piece in the container.

According to a first aspect of the invention, one or more of these objects are achieved with an insert piece of the type described in the preamble in which each section of the peripheral wall has a wall section of substantially constant diameter, and in which two adjacent sections are connected to one another by an annular transition which is substantially perpendicular to the wall sections.

This allows the insert piece to obtain a maximum level of rigidity for a given wall thickness, so that to obtain a required level of rigidity the thinnest possible wall thickness can be selected without the insert piece being deformed under the pressure required. This rigidity is produced in particular by the annular transitions. In addition, the sections of constant diameter offer the maximum possible surface area for the volume. Also, an annular transition is eminently suitable for absorbing a certain deformation in the longitudinal direction of the insert piece without the wall sections being plastically deformed.

The peripheral wall preferably comprises two sections of different diameters. In view of the length of a standard drinks can, two sections are sufficient to provide the insert piece with sufficient rigidity while the wall can be made sufficiently thin, and an insert piece comprising two sections is most favorable in terms of production.

Preferably, the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end. This design makes the insert piece easy to produce. Also, a space is formed between the insert piece and the wall of the container in which the insert piece is arranged, which is

greater at the closed end of the insert piece than at the section of the insert piece which is attached to the container. This design at any rate means that there is no space in the section of the container which is filled with product which is more or less separate from the remainder of the contents of the container and in which the product remains more or less enclosed. When a product is heated from the insert piece, the product in a separate space may begin to boil. Boiling of the product is undesirable, since this can cause the quality of the product to deteriorate and since the heat transfer to the product is significantly reduced. Also, the remainder of the product remains insufficiently heated. In the case of cooling of a product, ice may form in a separate section, while the remainder of the product remains insufficiently cooled. In other words, the shape according to the invention is such that there is minimum possible disruption to the convection along the insert piece.

The insert piece is preferably made from packaging steel. Steel is a relatively inexpensive material which is easy to process so as to obtain the desired shape of the insert piece. However, other materials, such as aluminum, could also be used if appropriate.

The packaging steel is preferably coated with plastic. This provides protection against corrosion and also against the product in the container being affected by the packaging steel.

According to a preferred embodiment, the insert piece is produced by deep-drawing. Deep-drawing is a very suitable way of producing a product having the shape of the insert piece, since elongate products with a closed end are easy to produce by deep-drawing. A peripheral wall comprising wall sections of constant diameter with annular transitions can be produced in a few deep-drawing steps with, at the same time, the section having the closed end being of a smaller diameter than the section having the open end.

According to a second aspect of the invention, a container for a product to be heated or cooled is provided, the container being provided, according to the invention, with an insert piece as described above.

A third aspect of the invention provides a process for forming an insert piece for a container for a product which is to be heated or cooled, which insert piece is used to accommodate a heating or cooling means, and which insert piece is of elongate form with a peripheral wall and an open end and a closed end. According to the invention, the insert piece is produced by deep-drawing in at least two deep-drawing steps, in such a manner that the peripheral wall of the insert piece is composed of two sections of different diameters.

The result is a process which makes it easy to produce an insert piece which is as rigid as possible.

Although the above text has primarily spoken of a drinks can holding a drink which is to be heated, it will be clear that the insert piece according to the invention is suitable for accommodating either a heating means or a cooling means, that the product to be heated or cooled may be either a drink, a foodstuff or some other type of product, and that the container, besides being a drinks can, may also be a different type of container.

The invention will be explained on the basis of an exemplary embodiment and with reference to the drawing.

The only figure shows a cross section through an insert piece according to the invention.

The insert piece 1 has a closed top end 2, a first wall section 3, an annular transition section 4 to a second wall section 5 and an outwardly projecting rim 6, the outer rim section 7 of which is provided for attachment to a container with an opening through which the insert piece fits.

The insert piece is produced by the deep-drawing of a blank of packaging steel which, in one embodiment, is coated with plastic. To produce the top and bottom sections, the deep-drawing is carried out in a number of steps, in which firstly the bottom section 5 and then the top section 3 is deep-drawn. If appropriate, the projecting rim 6 is formed in a separate step which is carried out in a conventional way.

The annular transition section 4 connects the top section 3 to the bottom section 5. This ring 4 imparts additional rigidity to the insert piece halfway up its height. In the event of an excess pressure being applied in a drinks can during filling under pressure or during pasteurization or sterilization, the wall section 3, 5 of the insert piece will be placed under pressure from outside. Without the ring 4, the height of the wall section is such that the wall section buckles if the material of the wall is too thin. The annular section 4 which is provided according to the invention in fact divides the total height into two halves which, on account of their lower (half) height, will buckle less readily, so that a thinner material can be used.

The annular section 4 itself may serve as a type of cup spring and can absorb a certain deformation in the longitudinal direction of the insert piece. However, in the event of an excess pressure it will be the top end 2 which buckles first.

It will be understood that the exemplary embodiment described above in no way limits the invention. The scope of protection is defined by the claims which follow.

CLAIMS

1. An insert piece for a container holding a product which is to be heated or cooled, which insert piece defines a substantially elongate space which is intended to accommodate a heating or cooling means, the insert piece having a peripheral wall with a closed end and an open end, which open end is provided with an outwardly projecting rim for attaching to the container, the peripheral wall comprising different sections, characterized in that each section of the peripheral wall has a wall section of substantially constant diameter, and in that two adjacent sections are connected to one another by an annular transition which is substantially perpendicular to the wall sections.
2. The insert piece as claimed in claim 1, characterized in that the peripheral wall comprises two sections of different diameters.
3. The insert piece as claimed in claim 2, characterized in that the section which adjoins the closed end of the insert piece has a smaller diameter than the diameter of the section which adjoins the open end.
4. The insert piece as claimed in one of the preceding claims, characterized in that the insert piece is made from packaging steel.
5. The insert piece as claimed in claim 4, characterized in that the packaging steel is coated with plastic.
6. The insert piece as claimed in one of the preceding claims, characterized in that the insert piece is produced by deep-drawing.
7. A container for a product which is to be heated or cooled, provided with an insert piece as claimed in one of the preceding claims.
8. A process for forming an insert piece for a container for a product which is to be heated or cooled, which insert piece is used to accommodate a heating or cooling means, and which insert piece is of elongate form with a peripheral wall and an open end and a closed end, characterized in that the insert piece is produced by deep-drawing in at least two deep-drawing steps, in such a manner that the peripheral wall of the insert piece is composed of two sections of different diameters.

ABSTRACT

The invention relates to an insert piece for a container holding a product which is to be heated or cooled, which insert piece defines a substantially elongate space which is intended to accommodate a heating or cooling means, the insert piece having a peripheral wall with a closed end and an open end, which open end is provided with an outwardly projecting rim for attaching to the container.

According to the invention, the peripheral wall is provided with a reinforcement means, preferably a stepped form.

The invention also relates to a container for a product which is to be heated or cooled, provided with an insert piece of this nature, and to a process for forming an insert piece.

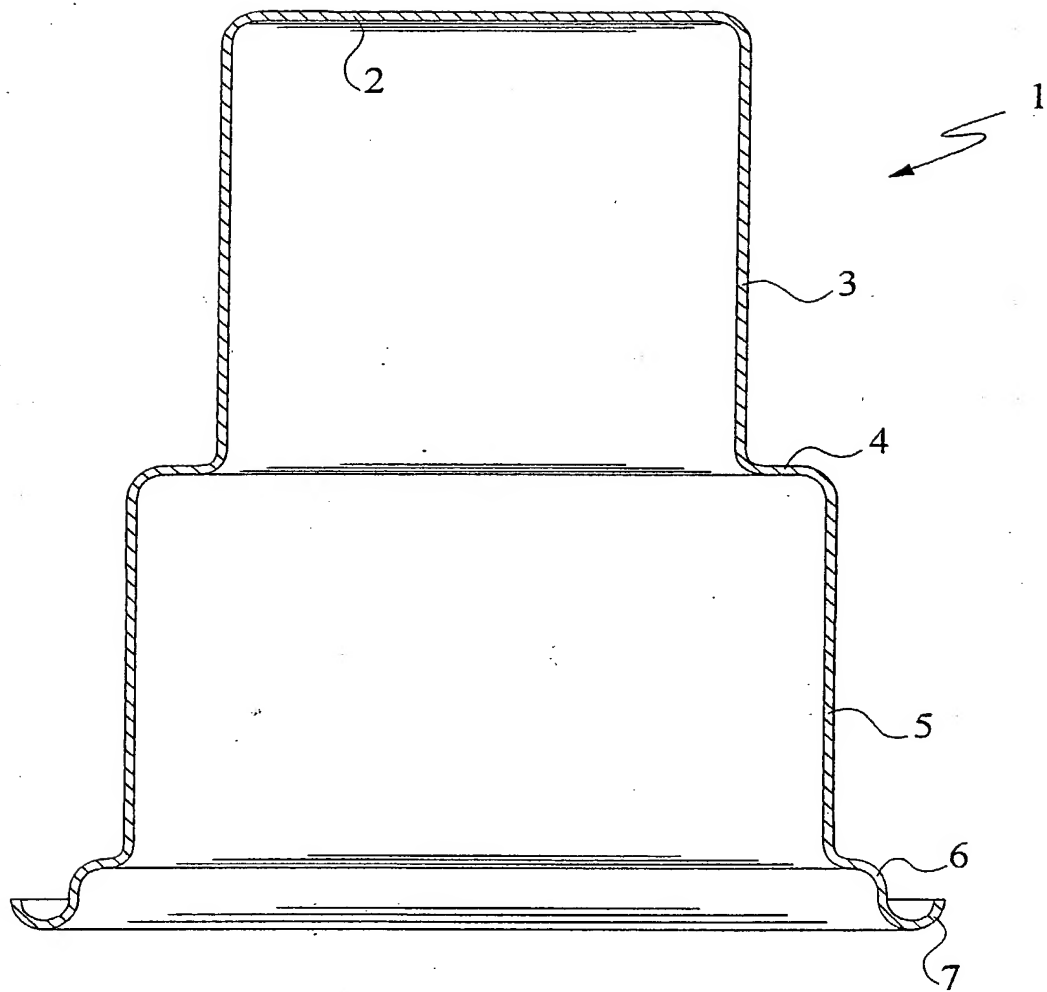


Fig. 1

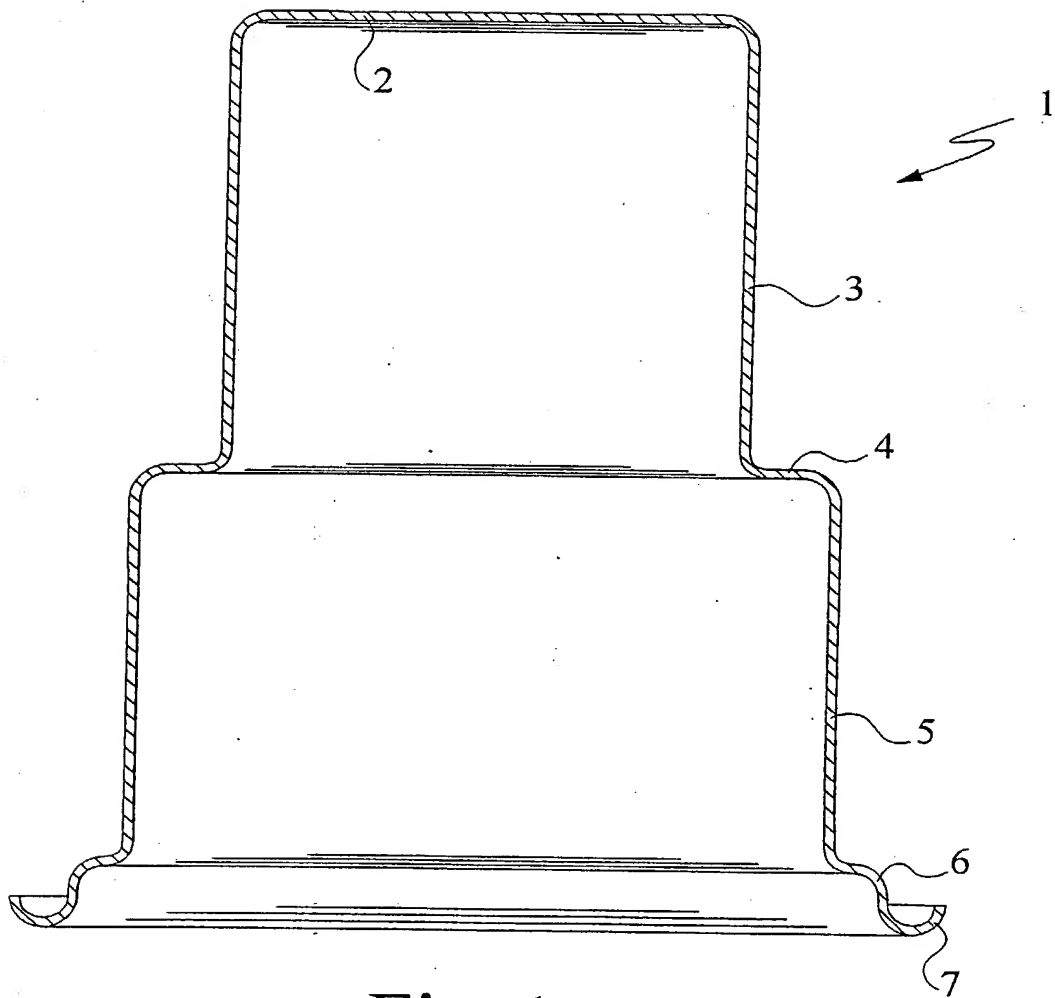


Fig. 1

COMBINED DECLARATION AND POWER OF ATTORNEY FOR
UTILITY PATENT APPLICATION (Includes PCT)

Attorney Docket No.
APV31542

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;
that

I believe I am the original, first and sole inventor (if only one name is listed below)
or an original, first and joint inventor (if plural inventors are listed below) of the
subject matter which is claimed and for which a patent is sought on the invention entitled:

INSERT PIECE FOR A CONTAINER HOLDING A LIQUID WHICH IS TO BE HEATED OR COOLED, CONTAINER
HAVING AN INSERT PIECE OF THIS NATURE, AND PROCESS FOR FORMING AN INSERT PIECE

the specification of which (check one)

☐ is attached hereto.

☐ was filed on _____ as Application Serial No. _____ and was amended
on _____. (if applicable)

☒ was filed as PCT International Application No. PCT/NL00/00593 on August 25, 2000, and
was filed in the U.S. National Stage on February 15, 2002 as U.S. Patent Application
No. 10/049,660.

I hereby state that I have reviewed and understand the contents of the above identified
specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this
application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I do not know and do not believe the claimed invention was ever known or used in the United
States of America before my or our invention thereof, or patented or described in any printed
publication in any country before my or our invention thereof or more than one year prior to
this application, that the same was not in public use or on sale in the United States of
America more than one year prior to this application, that the invention has not been
patented or made the subject of an inventor's certificate issued before the date of this
application in any country foreign to the United States of America on an application filed
by me or my legal representatives or assigns more than twelve months prior to this
application.

I hereby claim foreign priority benefits under Title 35, United States Code §119 and/or
§365(a)(b) of any foreign application(s) and United States provisional applications for
patent or inventor's certificate listed below and have also identified below any foreign
application for patent or inventor's certificate having a filing date before that of the
application(s) on which priority is claimed:

Prior Foreign and U.S. Provisional Application(s)

Priority Claimed

<u>1012937</u>	<u>NL</u>	<u>30/08/99</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	Day/Month/Year Filed	Yes	No
<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	Day/Month/Year Filed	Yes	No

I hereby claim the benefit under Title 35, United States Code, §120 and/or §365(c) of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

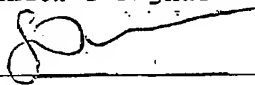
Application Serial No.	Filing Date	Status
		(patented, pending, abandoned)

Application Serial No.	Filing Date	Status
		(patented, pending, abandoned)

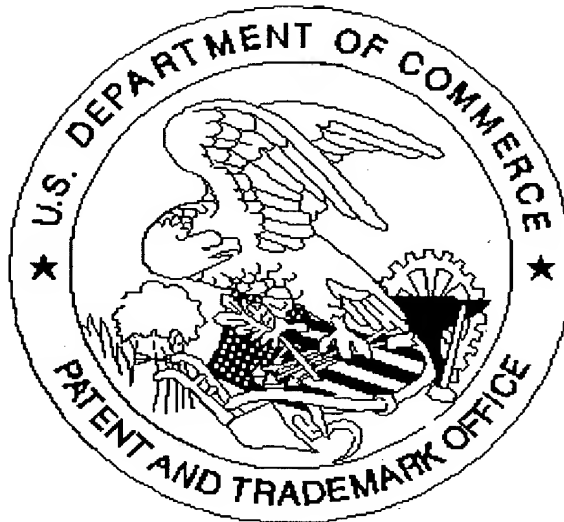
I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith; Stevens, Davis, Miller & Mosher, L.L.P.; Anthony P. Venturino, Reg. No. 31,674; James E. Ledbetter, Reg. No. 28,732; and Thomas P. Pavelko, Reg. No. 31,689. Direct all telephone calls to telephone no. 202-785-0100 and faxes to 202-408-5200.

Address all correspondence to 1615 L Street, N.W., Suite 850, Washington, D.C. 20036.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

100 Full Name of Sole, First Inventor <u>Sjoerd Odrik VAN DER VEEN</u>	Inventor's Signature 	Date <u>07/22/02</u>
Residence: <u>F-63100 Clermont-Ferrand, France</u> <u>FRX</u>		Citizenship NL
Post Office Address: <u>Impasse Ernest Picard, F-63100 Clermont-Ferrand, France</u>		

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